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Before the  
FEDERAL COMMUNICATIONS COMMISSION  
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In the Matter of )

Numbering Resource Optimization )

CC Docket No. 99-200

**ERRATUM TO  
COMMENTS OF U S WEST COMMUNICATIONS, INC.**

Please substitute the attached Comments of U S WEST Communications, Inc. originally filed May 19, 2000. This erratum replaces Workpaper 1. As indicated in U S WEST's Comments on page 4, second paragraph of Section II, U S WEST's recoverable costs for number pooling are "approximately \$345,212,444." Due to a computer error, Workpaper 1 was not calculated and printed properly and therefore, the figures do not match. This error was not discovered until after the filing was made on May 19, 2000.

U S WEST apologizes for any inconvenience this may cause.

Respectfully submitted,

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## SUMMARY

The Federal Communications Commission (“Commission”) should adopt a federal cost recovery mechanism that ensures carriers will recover their full costs of complying with the federal number pooling mandate. U S WEST Communications, Inc. recommends that the nonrecurring costs of providing number pooling be recovered by adding those costs to the existing local number portability end-user surcharge and that the recurring costs be recovered through a charge added to the Subscriber Line Charge. Carriers -- particularly incumbent local exchange carriers -- will incur substantial costs to implement number pooling. Whatever mechanism is used, the Commission should permit recovery of all of these costs, including any costs associated with state trials.

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U S WEST Communications, Inc. (“U S WEST”) files these comments in response to the Federal Communications Commission’s (“Commission”) Further Notice of Proposed Rulemaking<sup>1</sup> in this docket. Part I of these comments discusses some general issues in connection with cost recovery for number pooling. Part II of these comments contains U S WEST’s preliminary cost study for number pooling, including a general explanation of what costs U S WEST expects to incur for the provisioning of number pooling and a set of four workpapers that details the costs associated with U S WEST’s implementation of number pooling.<sup>2</sup>

In its March 31, 2000, Order, the Commission determined that it should establish a federal cost recovery mechanism to fulfill its obligation to ensure that the costs of 1K number pooling are “borne by all telecommunications carriers on a competitively neutral basis.”<sup>3</sup> The Commission, however, deferred a decision on what that mechanism should be until it received

<sup>3</sup> 47 U.S.C. § 251(e)(2).

further information describing the extent of the costs that carriers will incur. As Part II of these comments demonstrates, these costs are substantial. Moreover, because incumbent local exchange carriers (“LEC”) such as U S WEST have more customers and more lines than their newer competitors, incumbents will bear most of the costs of number pooling. Accordingly, in order to satisfy the “competitively neutral” requirement, it is imperative that the Commission establish a federal cost recovery mechanism that allows carriers to recover fully their number pooling costs.

U S WEST believes that the federal cost recovery mechanism should be divided into two parts. First, the nonrecurring costs for developing and implementing number pooling should be recovered through an end-user surcharge like the local number portability (“LNP”) surcharge. The Commission adopted virtually the same cost recovery principles for number pooling as it had for LNP because it recognized that the cost structure and types of costs for both services were very similar. The Commission should similarly permit carriers to recover their nonrecurring costs for number pooling through a surcharge. Indeed, rather than establishing a new separate surcharge, U S WEST suggests that the Commission allow carriers to add their nonrecurring number pooling costs to the existing LNP surcharge for the remaining four years for which that charge is authorized.

Second, the recurring costs of providing number pooling should be recovered through a charge added to the existing Subscriber Line Charge (“SLC”) that results from price caps. The use of the SLC as a vehicle for cost recovery is appropriate because the costs of number pooling are not usage-based, and number pooling will benefit all customers with telephone lines.

However the Commission structures its cost recovery mechanism, it must ensure that carriers are able to recover fully their costs of number pooling. In fact, because incumbent LECs

such as U S WEST, will bear most of the costs of number pooling, the statutory requirement of competitive neutrality demands full cost recovery. The Commission has adopted the same two-part test for identification of recoverable costs as it did in connection with LNP: eligible costs would not have been incurred “but for” the implementation of number pooling and must be for “the provision of” number pooling. The Commission has divided number pooling costs into the three categories of shared industry costs, carrier-specific costs directly related to 1K number pooling, and carrier-specific costs not directly related to 1K number pooling.

Although U S WEST has no objection to these categories in theory, the test must be applied in a way that enables carriers to recover all of their costs attributable to number pooling. As U S WEST explained in its Application for Review of the Common Carrier Bureau’s (“Bureau”) Cost Classification Order in the number portability docket, the Bureau’s application of this test in the context of number portability does not provide adequate cost recovery.<sup>4</sup> The Commission should not make the same mistake here. Carriers should be permitted to recover all costs that they incur as a result of the federal number pooling mandate without drawing unwarranted fine lines attempting to exclude costs that are deemed “indirect” or “incidental.”

In addition, the Commission should not rely on the states to permit recovery for costs associated with state number pooling trials that states order pursuant to authority delegated by the Commission. The Commission and the states have largely independent jurisdictions and

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<sup>4</sup> In particular, the Bureau’s Order unlawfully excludes costs that the Bureau itself admitted “may not have been incurred absent telephone number portability.” In the Matter of Telephone Number Portability Cost Classification Proceeding, Memorandum Opinion and Order, 13 FCC Rcd. 24495, 24505 ¶ 24 (1998) (“Cost Classification Order”); see also Application for Review of U S WEST, CC Docket No. 95-116, RM 8535, filed Jan. 13, 1999.

regulate different services, so neither the Commission nor the states may depend on the other to make up any shortfall in its own cost recovery mechanism.<sup>5</sup>

## II. U S WEST WILL INCUR SUBSTANTIAL COSTS TO COMPLY WITH THE COMMISSION'S NUMBER POOLING MANDATE

In this section, U S WEST presents the results of its preliminary cost study concerning the costs that will result from the implementation and provision of number pooling. U S WEST stresses that the industry is at a very early stage of implementation, and these costs will evolve over time as U S WEST continues to work internally and with its vendors to design the appropriate network architecture and determine what other changes need to be made to implement number pooling.

Based on its preliminary cost study, U S WEST's recoverable costs for number pooling will be approximately \$345,212,444.<sup>6</sup> This total is based on the four workpapers attached to these comments that detail the various costs from number pooling. Consistent with the Commission's determination, this total reflects an offset of the approximately \$3.2 million that U S WEST estimates it will save through the delay of Numbering Plan Area ("NPA") splits.

### A. Network (Operations and Technologies)

Workpapers 2 and 2A set forth the network costs U S WEST will incur for the provision of number pooling. These costs fall into four categories:

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<sup>5</sup> See Smith v. Illinois Bell Tel. Co., 282 U.S. 133, 148-49 (1930) (state regulators have "no authority to impose intrastate rates, if as such they would be confiscatory, on the theory that the interstate revenue of the Company was too small and could be increased to make good the loss"); Hawaiian Tel. Co. v. Public Util. Comm'n of Hawaii, 827 F.2d 1264, 1275 (9th Cir. 1987) (where regulator fails to provide recovery of costs assigned to its jurisdiction, the danger exists that "some costs of plant and expenses would not be included in the rate computations of either the [state regulator] or the FCC" and, as a result, "carrier[s] may be deprived of a fair rate of return when interstate and intrastate jurisdictions are both taken into account"), cert. denied, 487 U.S. 1218 (1988).

<sup>6</sup> See Workpaper 1.



1. Switching -- U S WEST will incur number pooling costs in connection with 5ESS, DMS100, DMS10, and AXE10 switches.<sup>7</sup>

U S WEST will incur costs for feature packages in its 5ESS switches. These features will provide the following capabilities related to number pooling: (1) correctly route calls when numbers are pooled into a switch but not yet assigned; (2) handle situations where numbers are pooled into one switch but one of those numbers is ported to a different switch; (3) expand the total number of NXXs that the switch can handle beyond its current limit of 250, which is inadequate in a number pooling environment; and (4) provide an announcement to callers that a call cannot be routed as dialed due to a routing error so that callers will initiate a repair complaint rather than receiving a Fast Busy Tone.

U S WEST will incur costs for similar features on its DMS100 switches. U S WEST also will need to add features that will enable different types of numbers (i.e., those native to the switch, ported into the switch, pooled into the switch, or from different NPAs) to be assigned to the same grouping arrangement for services such as Centrex and integrated services digital network ("ISDN"). In addition to these feature costs, the implementation of number pooling will require U S WEST to advance the time at which it would otherwise install generic software and associated hardware. Workpaper 2 includes the total costs for deploying this software and hardware; however, Workpaper 1 only includes the costs associated with accelerating this deployment of software and hardware from its originally scheduled date.

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<sup>7</sup> U S WEST currently has some 1AESS switches and a 4AESS switch in its network. The 1AESS switches are expected to be removed from the network before federal number pooling implementation, and U S WEST accordingly is not including any costs associated with those switches. If, however, states require number pooling trials on a shorter timeline than the federal schedule, U S WEST probably will incur reimbursable costs associated with 1AESS switches. U S WEST's single 4AESS switch is a tandem only switch and accordingly is not affected by number pooling.

U S WEST's costs for DMS10 and AXE10 switches are similar to those for DMS100. U S WEST had no business plans to install the generic operating systems required for the number pooling features to function and, accordingly, will incur the additional costs associated with those systems.

U S WEST also will incur some miscellaneous switching costs associated with the increased use of inter-switch trunking to provide voice messaging in a number pooling environment.

2. Service Control Point -- U S WEST purchased 5 service control point ("SCP") pairs for purposes of local number portability, 4 pairs for local routing number queries and 1 pair to serve as a Message Relay Point for Message Relay Service queries for ported numbers. Number pooling will significantly increase the total number of these queries and exhaust the capacity on the SCP pair serving as a Message Relay Point. Accordingly, U S WEST will need to add a second SCP pair to serve as a Message Relay Point for pooled numbers. Workpaper 2 includes the portion of the hardware, software, maintenance, feature and capacity costs for that pair directly attributable to number pooling. Without this added Message Relay Point, U S WEST would not have sufficient capacity to ensure that calls to pooled numbers are routed properly and completed.

3. Links From Signalling Transfer Points To SCP -- U S WEST will add links from its existing signalling transfer points ("STP") to the newly added integrated service control point ("ISCP") pair used as a Message Relay Point. U S WEST will incur capital hardware costs to equip and build the required DSO circuit equipment at both the STP and ISCP sites at each end of a link and monthly lease charges to provide the point-to-point private line service required by

each of the links. These links are entirely attributable to number pooling and will be used only for message relay service queries.

4. Personnel Costs -- U S WEST will bear substantial personnel-related costs for purposes of planning, provisioning and maintaining the added number pooling software and hardware and for the administration, inventory management and reporting requirements imposed by the Commission's Order.

B. Information Technologies And Operation Support Systems

Significant Operation Support Systems ("OSS") changes are required to support the implementation of 1K pooling, including certain developmental efforts with Telcordia. Indeed, all OSS that use telephone numbers or NXXs will be affected. The costs for these changes -- which are set forth in detail in Workpaper 3 -- can be broken down into eight categories:

1. Network Routing -- These costs consist of U S WEST's share of the industry costs associated with the Number Portability Administration Center ("NPAC") and U S WEST-specific costs for the installation, deployment and testing of NPAC and the associated interfaces with U S WEST's systems. The Commission has already found that carriers are entitled to recover shared industry costs.<sup>8</sup> For purposes of this cost study, U S WEST uses the same 30% share of joint industry costs that was applied in the context of number portability. The U S WEST-specific costs in this category are primarily for the resources required to install, test and deploy U S WEST's Service Order Administration/Local Service Management System which provides network routing information to NPAC that is directly related to the provision of 1K number pooling.

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<sup>8</sup> See Order ¶ 205.

2. Telephone Number Administration -- This category captures the costs for developing a system to identify 1K blocks and determine their level of contamination for purposes of identifying blocks to be donated and received, creating the report required by the Commission that specifies the usage category for numbers assigned to U S WEST and associated forecasting capabilities. These functions clearly are directly related to the provision of number pooling and fulfilling the requirements of the Commission's Order.

3. Trials -- This category is an estimate of the costs U S WEST will incur in supporting state-mandated number pooling trials, as well as the costs associated with implementing 1K pooling using NPAC v.1.4. This estimate assumes that U S WEST will participate in six state trials prior to the estimated national roll-out in 2001. Although states will determine whether to order these trials, they will do so pursuant to authority delegated to them by the Commission. As discussed above, because these costs are the direct result of a federal mandate, the costs for these trials should be recovered through the federal cost recovery mechanism and not be left for state mechanisms.

4. Provisioning -- This category encompasses costs for the necessary changes to U S WEST's various provisioning systems that are directly related to the provision of 1K number pooling. A portion of these costs consists of licensing fees to be paid to Telcordia for system modifications needed for the implementation of number pooling. The remainder are the development and resource costs U S WEST will incur for internal systems development. The affected systems include, among others, the Service Order Processing and Distribution System and related systems used to manage service orders, which must be changed to handle orders with "pooled in" numbers. In addition, U S WEST will bear substantial costs in modifying its

systems to synchronize data in various systems so that the network has the intelligence to properly route calls involving pooled numbers that were initially misrouted.<sup>9</sup>

5. Billing -- U S WEST will incur costs associated with billing changes needed for the provision of number pooling. However, U S WEST cannot estimate those costs until the Commission determines what cost recovery mechanisms will be used for number pooling.

6. Repair -- U S WEST will bear costs to have Lucent Technologies, Inc. develop a new repair-related system for U S WEST. This development is directly related to number pooling: the database design for U S WEST's current system will not work with number pooling.

7. Maintenance -- This category isolates the costs U S WEST will incur for the maintenance of the software listed in all of the above categories (both purchased and in-house). Such maintenance is necessary for the provision of number pooling to ensure, among other things, that the software developed for number pooling is compatible with the current version of the operating system and that adequate backup and recovery procedures are in place. U S WEST used the standard range of 11 to 15% of the total cost of the software. This standard is based on U S WEST's contracts with software vendors and on its internal experience.

8. Capital -- This category captures the hardware upgrade and replacement costs necessary to support the new software specified in the above categories.

U S WEST also expects to incur certain provisioning costs for systems that, although developed for number pooling, will also increase efficiencies in the network. The savings from

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<sup>9</sup> As explained in Workpaper 3, the costs for this function are based on the assumption that it will be developed internally. If that proves infeasible, U S WEST may have to outsource that development to Telcordia, in which case the cost for this function probably will increase by as much as 100%.

these efficiencies will offset the development and testing costs. Accordingly, U S WEST has not classified those costs as recoverable.

C. Service Delivery

U S WEST will incur substantial costs for service delivery directly related to the provisioning of number pooling. Workpapers 4 and 4A set forth those costs. As these Workpapers indicate, these costs consist of additional headcount and associated training and capital costs. The majority of U S WEST's service delivery costs are associated with the incremental time that will be spent by frontline personnel who negotiate service orders. In areas where number pooling is deployed, these personnel will have to check every order to determine whether the assigned number is a pooled number. They must then create a manual written order (at least initially) with additional entries for pooled numbers, and, when appropriate, explain the new Commission-definitions as they apply to *assigned* and *reserved numbers*. At its peak, the headcount for frontline personnel will increase by 4.2%. The additional headcount and expense for frontline personnel will decrease as U S WEST deploys a mechanized process for ordering.

In addition to the expenses for frontline personnel, U S WEST will have to add headcount to several other areas:

- Methods and Procedures -- To develop methods and procedures for number pooling, such as dealing with customers who have exceeded the 45-day limit imposed by the Commission;
- Backroom Costs -- To handle the expected increase in Service Order errors, especially during the time that orders are manually entered, and to ensure the retention of numbers that currently reside in a contaminated 1K block of numbers that U S WEST will donate;

- Operator Information Services -- To deal with the complexities associated with directory listings; and
- Program Office -- To develop and test systems and ensure coordination with the affected U S WEST business units.

U S WEST also will have to create and deliver training programs to personnel in all of these function groups concerning the process and criteria for number pooling.

All of these costs would not be incurred “but for” number pooling and are directly related to the provisioning of number pooling.

D. Savings Resulting From Number Pooling

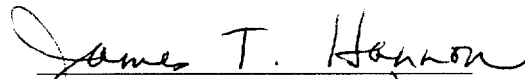
U S WEST will realize approximately \$3.2 million in savings because number pooling will delay the need for area code relief in the form of NPA splits. U S WEST estimates that each split costs approximately \$3.5 to \$5 million. These costs include expenses associated with adding announcements to each affected switch, Automatic Number Identification conversion, changes to OSS and customer education. The implementation of number pooling will *not* eliminate the need for area code relief. Instead, it will simply delay the need for such relief in a given area by about two years. Accordingly, U S WEST will realize only the savings from delaying these expenditures for two years.

Moreover, it is not even clear that number pooling will substantially push back the time at which major changes will be needed to the North American Numbering Plan ("NANP"). Although early estimates suggested that number pooling might extend the life of the NANP by up to 25 years, there is very little information on which to base a reliable estimate, and U S WEST believes that the 25-year figure is almost certainly greatly inflated.

Respectfully submitted,

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